

CLAIMS

The invention claimed is:

1. A method for assisting a purchaser in conducting electronic commerce on a computer network, the method comprising:

determining a goal for a purchaser, the goal pertaining to a commerce domain; and

using a knowledge base to create one or more partial order plans to satisfy the determined goal, the knowledge base having embodied therein information pertaining to the domain of the goal.

2. The method of claim 1, wherein the plan incorporates a list of items necessary to carry out the determined goal.

3. The method of claim 1, wherein the act of creating a plan to satisfy the determined goal is performed using a partial order planner.

4. The method of claim 1, wherein the act of creating a plan to satisfy the determined goal is performed using a non-monotonic truth maintenance system.

5. The method of claim 1, wherein the knowledge base includes one or more plan and goal graphs.

6. The method of claim 1, wherein the knowledge base includes one or more concept graphs.

7. A buyer agent for conducting electronic commerce across a computer network, the buyer agent comprising:

a knowledge base including information about one or more domains; and

an inference engine with access to the knowledge base,

wherein the inference engine uses the information in the knowledge base to create a plan for conducting electronic commerce.

8. The buyer agent of claim 7, wherein the knowledge base includes one or more plan goal graphs.

9. The buyer agent of claim 7, wherein the knowledge base includes one or more concept graphs.

10. The buyer agent of claim 9, wherein the inference engine includes a partial order planner and wherein the inference engine uses the partial order planner to create one or more plan instances.

11. The system of claim 10, wherein the inference engine manages life cycle states of the one or more plan instances according to a commitment level of the partial order planner.

12. The system of claim 11, wherein the inference engine manages monitoring of the situation using the one or more concept graphs according to the life cycle states of the one or more plan instances.

13. The system of claim 12, wherein the inference engine determines what further processing is needed by the partial order planner based on the monitoring of the situation.

14. The buyer agent of claim 7, wherein the knowledge base includes one or more scripts, each of the one or more scripts comprising a sequence of partially-specified primitive actions.

15. The buyer agent of claim 7, wherein the inference engine includes a partial order planner.
16. The buyer agent of claim 7, wherein the inference engine includes a non-monotonic truth maintenance system.
17. The buyer agent of claim 7, wherein the buyer agent is a Internet web browser plug-in.
18. The buyer agent of claim 17, wherein the buyer agent further includes a monitoring component, the monitoring component recording the actions of a user within the Internet web browser.
19. A method for assisting a purchaser in conducting electronic commerce on a computer network, the method comprising:
 - using an intent interpreter to determine a goal for a purchaser, the goal pertaining to a commerce domain; and
 - using a knowledge base to create one or more partial order plans to satisfy the determined goal, the knowledge base having embodied therein information pertaining to the domain of the goal.
20. The method of claim 19, wherein the plan incorporates a list of items necessary to carry out the determined goal.
21. The method of claim 19, wherein the act of creating a plan to satisfy the determined goal is performed using a partial order planner.
22. The method of claim 19, wherein the act of creating a plan to satisfy the determined goal is performed using a non-monotonic truth maintenance system.
23. The method of claim 19, wherein the knowledge base includes one or more plan and goal graphs.

24. The method of claim 19, wherein the knowledge base includes one or more concept graphs.
25. A buyer agent system comprising:
- a plurality of intelligent agents, each of the plurality of intelligent agents including:
 - a knowledge base including information about one or more domains;
 - an inference engine with access to the knowledge base, the inference engine including a partial order planner;
 - a data management system that collects and distributes data; and
 - a graphical user interface system that displays information to a user.
26. The buyer agent system of claim 25, wherein the knowledge base includes one or more concept graphs.
27. The buyer agent system of claim 26, wherein each agent of the plurality of intelligent agents determines the intentions of one or more users and wherein the data management system of a first agent of the plurality of intelligent agents shares data with a second agent of the plurality of intelligent agents representing the determined intentions of the one or more users to facilitate collaboration.
28. The buyer agent system of claim 27, wherein the system uses the shared data to automatically detect conflicts between the one or more users.